UT Extension

BEEF CATTLE TIME

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Limiting Downer Cows in Beef Herds

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On December 23, 2003, a cow with Bovine Spongiform Encephalopathy (BSE) was identified in Washington state, and the impact is still being felt in the nation's beef industry. Several rule changes have since been issued by USDA, one of which was the banning of downer cows from the food chain.

A "downer cow" can be defined as one that is unable to get up from a lying position and walk. Cows, as well as other stock, may become downers due to disease, physical problems or injury. Appropriate management can reduce the percentage of downers significantly. Cow-calf producers should evaluate their management and culling practices to reduce the possibility of downers as well as those that are at risk of becoming downers.

At-risk downers are those that have physical problems that could result in them becoming downers. These animals could either be turned down at the livestock market or severely discounted to cover potential loss should the animal not be able to walk when reaching the harvest site.

Here are some management suggestions for identifying, culling and marketing beef cows that should help reduce the number of at-risk cows in a herd.

1. Cull cows after they pass 10 years of age. This may sound severe, but cows past 10 years of age will develop physical problems and chronic diseases that result in both reduced production and market value. Both reproduction and calf performance decline.

2. Pregnancy check and cull females that are open. If cow-calf producers would develop and maintain a short calving and breeding season and then pregnancy check and cull cows based on their being open and other reproductive problems, many cows would be removed from the herd before they were at high risk to become downers.

3. Manage to reduce calving problems or difficult births. It is estimated that approximately 50 percent of downer cows are the result of calving problems and mismanagement by the producer. Several simple practices could help prevent calving problems and reduce the incidence of downer cows.

- Select replacement cows from those born the first half of the calving season; properly grow and develop them.
- Breed first-calf heifers to a bull with a low birth weight EPD.
- Observe cows frequently during calving season. Do not allow the calving process to continue for an extended period. Producers should consider providing assistance earlier than under normal calving conditions.
- Use common sense when providing assistance. Reckless use of calf pullers can cause nerve damage and increase the possibility of injuries that could result in paralysis of the cow.

4. Maintain equipment and facilities in good state of repair. Loose boards, weak fences and gates that are not strong enough to be in a cattle facility invite injuries that could contribute to cows becoming downers. Everything should be in good repair to keep possibilities of injury at a minimum. Injuries to cattle while working can become chronic or result in lameness, reducing production and increasing the risk of the animal becoming a downer.

5. Plan safe transportation of cattle. When hauling cattle, neither overload nor underload the truck or trailer. Loading facilities, as well as the truck or trailer, should have good footing. Drive carefully, avoiding sudden stops and starts. An animal that gets down and injured on the way to the market may be considered an at-risk downer by the market manager. Markets will not accept cattle that may not withstand the stress of marketing and transporting or that may not be ambulatory when reaching the slaughter facility.

6. Provide adequate nutrition to the herd. Poor nutrition results in health problems. Lots of nutritional

problems are due to feeding poor quality hay during the winter. The result will be loss of body condition and weak cows that lack strength to overcome the stresses of calving. These animals are also more susceptible to injuries and will go to the lower end of the social order of the herd.

Cow-calf producers should do an annual evaluation, cull and market aged breeding stock before they develop physical problems that could cause them to become downers and cause economic losses in both production and market value. As cows reach and exceed 10 years of age, their physical condition declines, they become less productive and market values declines. These cows are strong candidates for culling.

Naturally Occurring Multiple Births in Cattle

David Kirkpatrick, Professor
Animal Science

Every so often our office receives a call from a producer who wants to find out the probability of a cow having either twin or triplet calves. A limited amount of research has been done on the incidence of multiple births in cattle. J. J. Rutledge at the University of Wisconsin published a paper in the *Journal of Animal Science* in 1975 on the frequency of twins in both beef and dairy cattle.

Rutledge found a difference in twinning rates between dairy cattle and beef cattle breeds, with dairy cattle experiencing a higher frequency. Dairy cattle ranged from a 1.3 percent incidence in Jerseys, and a 3.4 percent in Holsteins to an 8.9 percent incidence in Brown Swiss. Small differences were reported in beef breeds with Hereford cattle having the lowest incidence (0.4 percent or one out of every 250 births) of twinning while Angus had 1.1 percent incidence. The Bos Indicus breeds experienced 0.2 percent and 0.4 percent twinning rates in Brahman and Santa Gertrudis, respectively.

Glenn Selk of Oklahoma State University found a paper published by Jones and Rouse in 1920 in the *Journal of Dairy Science* that reported the incidence of triplets in beef cattle to average one in 105,000 births and be more likely to occur in Brown Swiss (one in 3500 births). Quadruplets were extremely rare, occurring naturally at the rate of one in 665,000 births, with Brown Swiss again having the highest incidence.

Twins are classified as either fraternal or identical based on their origin. Fraternal twins originate from two, separate fertilized ova (eggs) due to multiple ovulations by the cow while identical twins are a result of the single fertilized egg (embryo) splitting during early development. Therefore identical twins, like cloned animals, are genetically identical. Fraternal twins are more common than identical twins. It has been reported that only about 10 percent of the naturally occurring twins in the cattle populations are identical. When fraternal twins are of different sexes, the female is very likely to be infertile. It is estimated that 95 percent of the heifers born twin to a bull are not fertile and are called "freemartins." These heifers should not be saved as replacement females for the herd.

Preparing for New Seedings

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The first step in successful pasture management is to have a good stand of grass. If the stand is thin, management will be much more difficult, due to decreased forage production and increased weed pressure. Since having a thick stand of grass is so important, proper establishment of a new stand is a critical part of pasture management. The first few months after seeding will determine the type of stand the pasture will start with. If attention is paid to a few details, a lot of time and money can be saved and considerable frustration avoided.

1. Fertilize according to soil test. Conditions in the field should be manipulated to favor the forage to be seeded. The first step in creating a favorable environment is to provide the nutrients needed for seed germination and seedling growth. The plant requires an optimum pH plus adequate nitrogen, potash and phosphate. The more acid the soil, the less these nutrients are available and the more conditions favor weeds over forage. Lime and fertilizer applications should be based on soil test results. For no-till seeding, if a soil pH is below 5.5, apply lime at least six months prior to seeding to ensure adequate time for pH improvement, or establish the field conventionally, which will allow the lime to be mixed with the soil during disking.

2. Plant August 15 to October 15. Seeding date is very important for successful establishment of forages. Tall fescue is most productive during the spring and fall when temperatures are relatively cool and moisture is plentiful. Hot, dry conditions during the summer cause a somewhat dormant period for tall fescue. The response of a plant to environmental conditions will be even more dramatic when it is a seedling. Plants need to be seeded when temperature, day length and moisture favor the young seedlings.

3. Plant 15-20 lb seed per acre. The maximum production from a hay field or pasture can only be achieved if enough plants are present to produce that yield. If only half a stand of grass is present, no amount of fertilizer can be added to produce the maximum yield. It is important to plant enough seed to ensure a full stand. Take a few minutes before planting and check the seed- flow rate through the seeder. With both broadcast seeders and no-till drills, mistakes can be made by planting too little seed, resulting in a poor stand due to a lack of seed, or planting too much seed and having to buy more seed to finish the remainder of a field, resulting in wasted time and money. Calibrating the drill or seeder ensures that the proper amount of seed is placed

in the field. Do not always depend on the seeding charts shown in the owners' manuals of drills, whether rented or owned. As seeders get used, seed flow rates may change. It is useful to determine the seed put out over an acre and then adjust the seed flow rate to meet the seeding recommendations.

4. Plant when moisture is available. Water is the most critical nutrient for plant survival. Without nitrogen, potash or phosphate, a plant might not be very productive, but it should still be able to survive. A lack of water will result in the plant's death. When using a no-till drill to plant a forage, you must have adequate soil moisture. You are depending on the drill to slice open a furrow in the soil, drop the seed and then press the soil together for good soil-to-seed contact. If the soil is dry, it may be too hard for the disc openers to get into the soil, and soil-to-seed contact will be poor. A poor stand may result because seed was dropped on top of the ground instead of being placed in the ground.

A second reason adequate moisture is needed for successful stand establishment is because seeds need moisture to germinate. Often there is just enough moisture for the seed to germinate and begin to grow, but before the root system can get established, the seedling dries up and dies from moisture stress. Don't be lulled into thinking that just because you are able to drill or disk a field, all problems are solved. Without adequate moisture, seedlings have no hope of getting established.

5. Plant ¼ - ½ inch deep. The first few weeks of a seedling's life are the most difficult. When a seed germinates, it must push its way through the soil to the surface so it can receive sunlight. Once in the sun, it can produce its own energy. Until that happens, it must depend on energy stored in the seed to grow. Tall fescue and orchardgrass should be planted between ¼ and ½ inch deep.

Following the steps listed above can help you start out with a thick grass stand, allowing it to be productive and profitable over its life.

Animal/Cattle Identification: Where Are We?

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A retired friend of mine said in last year's Christmas card that he was doing less slower. Some analogy might be drawn with the current U.S. animal identification system. More is happening, but at a too fast or too slow a pace depending on whom one asks. There are many in the beef industry who would like for USDA's Animal Plant Health Inspection Service (APHIS) to go ahead and state what is to be required and get on with it. There are others who hope that given enough time it will go away. Currently APHIS's approach is to evaluate current pilot projects which are underway and examine some new ones.

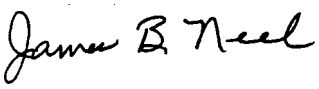
At the recent ID-EXPO in Chicago, 29 presentations from various companies described systems or equipment that could be used in the identification, data storage/transfer process. There were also presentations of what Australia, Canada and Mexico are doing with animal identification. Copies of many of the presentations from the conference are on the Internet at the following address: http://www.animalagriculture.org/Proceedings/IDINFOEXPO2004/2004%20ID%20Proceedings.asp. In addition to the presentations, there were exhibits and demonstrations ranging from DNA sampling and RFID (radio frequency identification) tags to retinal imaging. There is obviously a lot money on the line for the companies whose product/system is accepted by USDA.

To briefly review what has been happening, a group of about 100 persons representing 70 organizations, associations and government agencies have developed a U.S. Animal Identification Plan over a two-year period. That plan, which is available at www.USAIP.INFO, recommended use of the RFID tags in cattle and detailed a system for distribution of tags, recording necessary information, etc. USDA has and still is reviewing the plan and has come out with some guidelines. Bear in mind that the reason for moving ahead on an animal identification system is to help reduce the impact of a foreign animal disease outbreak or bioterrorism event. The logic is that the quicker APHIS can find, quarantine and possibly destroy the diseased animals, the lower the cost will be to the government, individuals and businesses. The objective of the National Animal Identification System is to provide a traceback system that can identify all animals and premises potentially exposed to an animal with a foreign animal disease within 48 hours after discovery. While not a stated reason for an ID system, it is hoped that such a system could help restore and perhaps gain new export markets for animal products and reduce consumer concerns about food safety at home and abroad.

USDA has issued some guiding principles for the development of the National Animal Identification System. They want to allow producers, to the extent possible, the flexibility to use current systems or adopt new ones without burdening them with multiple systems or requirements. They want to build on the standards set forth by the U.S. Animal Identification Plan. It is hoped that the system can remain technology neutral in order to use existing technologies as well as new ones that may be developed. They also wish to design a system without unduly increasing the role and size of government. Finally, they would like to ensure that the system does not prevent producers from being able to use it to add value by aligning production management with market incentives. While some bills have been introduced in congress to move the process along, USDA has the authority under the Animal Health Protection Act to require a National Identification System.

USDA has made it clear that it will not bear all of the cost of any system but will share it among federal,

state and private entities. Many believe that the cow-calf producer will have the smallest investment, at least those who currently have handling facilities and a tagger. Currently RFID tags cost about $2.50, but that could decline if large volumes are produced. If cattle arrive at a market without a tag, they will be tagged and the owner charged accordingly. Markets are very anxious about potential costs of equipment, labor, shrink, injury to cattle and personnel as well as the slow down in operations if they have to tag cattle. Representatives of McDonald's and Wal-Mart were at the Chicago meeting and are very anxious about our ability to have an ID system which can minimize impact on their customer demand should a disease occurrence take place. They could even require a system from suppliers. For now, beef producers should stay abreast of developments taking place. Wait until definite plans are in place before investing in RFID tags. Scanning equipment is probably not going to be necessary on the farm, but will more likely be required for markets, order buyers and other places where cattle change hands.



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From:

Leader/Agent

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